December 20, 1972

Memo to: Dan Neal

Tom Haggarty

From:

Ron Devitt

Subject: Pend Oreille Mines and Metals

On November 16, 1972, I conducted a survey on the tailings pond at Pend Oreille Mines and Metals near Metaline Falls.

Composite samples were collected:

- 1. At the headworks.
- 2. From the discharge pipe to the pond.
- 3. From the effluent.

Between points 1 and 2, hoses are used to bleed off waste water. The slurry is drawn off in a manner that the solids which settle quickly, build up the perimeter of the pond. The main volume of water (total usage 1380 gpm) discharges from the end of the pipe.

On the day of survey, the effluent was very clear. The main parameters which merit attention were pH and cyanide. Field pH (minimum 8.2) data obtained with a Analytical Instrument's meter were significantly higher than the laboratory value (7.5) of the effluent composite. Evidently during storage and shipping, the pH changed. Although there are contradictory opinions on the toxicity of cyanide, the value of .05 ppm is high enough to be of concern. Stipulation should be made in the waste water discharge permit to govern this parameter.

The lab results on the effluent and the discharge from the pipe (numbers 1 and 2) are somewhat questionable. Because of the high lavel of settlable solids, it would have been difficult to obtain a representative portion.

RD: pt 590200

DATA REPORT FORM

Location: Pend Oreille Mines and Metals

Field Results	Max.	Min.	'Mean	Median
Influent (#1)	Accordance Control Con			
Temperature (^O C)	11	11		Noted 1889 1889
рН	9.4	8.7	8.8	8.8
Conductivity (µmhos/cm)	350	250	300	300
Seattleable Solids	375	325	300	350
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Discharge from Pipe (#2)	The state of the s			
Temperature (^O C)	9	9	9	9
рН	9.2	8.7	. 8.9	8.9
Conductivity (µmhos/cm)	350	250	300 -	300
Settleable Solids	425	375	390	375
Final Effluent (#3)		-		
Temperature (^O C)	6	6	6	6
рН	8.5	8.2	8.4	8.4
Conductivity (µmhos/cm)	350	300	340	350
Settleable Solids	0	0	0	. 0
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DATA REPORT FORM

Location: Pend Oreille Mines and Metals

Station and Log number

Lab. Results	Influent #1	Discharge from pipe #2	Effluent #3			
рН	9.4	9.4	7.5			
Turbidity (JTU)	1250	700	5			
Conductivity (µmhos/cm)	360	345	390			
Sulfates	70	70	70			
Cyanide			0.05			
Zinc	47.2	4.2	0.09			
Copper	3.8	0.3	<0.1			
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STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

WATER QUALITY LABORATORY

ORIGINAL TO:

COPIES TO:

DATA SUMMARY

Source Pend (Reille	urce Pend (REILLE Mine,					C	Collected By R D					
	Goal, Pro./Obj. 3 : > 3											
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Log Number: 72 - Station:	(c. 10)	To A	GF F								- 10 10 10 10 10 10 10 10 10 10 10 10 10	
рН	1	i i	1					A Service of the serv				
Turbidity (JTU)	1254	766	5.				-		no color property and the state of the state		(1070	
Conductivity (umhos/cm)@250	364.	345	390	-	ļ				reas verificamente de		00095	
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BOD (5 day)						-	ļ	ļ		Transcool damps	00310	
Total Coliform (Col./100ml))	-				-		ļ	-		31504	
Fecal Coliform (Col./100ml)		-	-	ļ							31616	
NO3-N (Filtered)		-	1	ļ	ļ	ļ		ļ			00620	
Nul-N (Filtered)				ļ		ļ	-	ļ		ļ	00615	
NH3-N (Unfiltered)						ļ		ļ			00610	
T. Kjeldahl-N (Unfiltered)	ļ				ļ	ļ					00625	
O-PO4-P (Filtered)	ļ	ļ			ļ	-					00671	
Total PhosP (Unfiltered)	ļ				<u> </u>						00665	
Total Solids	ļ				ļ				ļ		00500	
Total Non Vol. Solids	<u> </u>											
Total Suspended Solids							-				00530	
Total Sus. Non Vol. Solids											New Year	
SULFATES	76.	20	20					·				
C YAN LEE			6,05			ļ			ļ	-		
Lead	6.5	165	ND			ļ						
ZINC	47 Z	42	4.4	Milk configuration representations		ļ			-			
Note: All regults are in P	3.8	6.3	16621							***************************************		
Note: All results are in PPM unless otherwise specified. ND is 'None Detected' Convert those marked with a * to PPB (PPM X 103) prior to entry into STORET												
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